

# Drought pushes endangered California salmon to the brink

31 October 2015, by Veronique Dupont



Fingerling Chinook salmon are dumped into a holding pen as they are transferred from a truck into the Mare Island Strait on April 22, 2014 in Vallejo, California

Chinook salmon were already endangered in California's Sacramento River, but the record drought parching the western United States has brought the iconic fish even closer to extinction.

Chinook, also known as king [salmon](#), need very cold water for their eggs to develop.

If everything goes right, the young salmon hatch and eventually make their way downstream toward the ocean, before later returning to the rivers to spawn and die.

But the migration has dropped off in recent years.

There were 4.4 million juvenile Chinook in 2009—half the number of four years earlier.

Last year, the number of juveniles passing by the dam in Red Bluff, at the northern end of California's Central Valley, was just 411,000.

Approximately 95 percent of these winter-run

Chinook eggs and juveniles did not survive, according to the US National Oceanic and Atmospheric Administration (NOAA).

"Last year was very difficult for these Sacramento River fish because of the drought and heat," NOAA spokesman Michael Milstein told AFP.

"This year we had hoped would be better."

It wasn't. Although there were more adult fish spawning this year, so far there have been 22 percent fewer juveniles coming downriver, Milstein said.

To date, only 217,000 juveniles have been counted passing through Red Bluff in 2015, versus 280,000 over the same period last year.



Fingerling Chinook salmon swim in a holding pen after they were transferred from a truck into the Mare Island Strait on April 22, 2014 in Vallejo, California

The Sacramento Chinook, designated an endangered species in 1994, have been struggling for years, for a number of reasons, but the drought has only exacerbated the problems.

Access to the historical spawning habitat of winter-run Chinook salmon on the Sacramento is cut off by the Shasta and Keswick dams, built in the 1940s.

### 'Too warm for spawning'

The remaining habitat, below the dams, is too warm for spawning, so managers release dam water to bring down the temperature and allow the population to reproduce.

"But the drought has reduced the amount (of water) available, both for fish and for other uses," explained Milstein.

He said rising air temperatures also raise the temperature of the water that remains.

The migration numbers are only preliminary, Milstein said, "but right now the news for these salmon is not good."

The [drought](#) and its impacts are "the type of things we expect to see more often with global warming," he said.

Some species, like sturgeon in the same rivers, might be able to adapt to the type of temperature changes projected with [global climate change](#), Milstein said.

But other aquatic species up and down the US west coast are facing a fate similar to Sacramento Chinook salmon.

Milstein said many sockeye salmon in Oregon and Washington also did not survive this year due to the warmer waters.

© 2015 AFP

APA citation: Drought pushes endangered California salmon to the brink (2015, October 31) retrieved 4 November 2016 from <http://phys.org/news/2015-10-drought-endangered-california-salmon-brink.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*